F-580

Customer No.: 27405

Amdt. Dated September 15, 2005 Reply to Office Action of July 18, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1. (Canceled)
- (Currently amended) The system, as set forth in claim [[1]] 6, comprising:
 an evaluation device positioned to examine the bubbles in the flow material passing
 through the conduit.
- 3. (Currently amended) The system, as set forth in claim [[1]] 6, wherein the pump comprises a peristaltic pump.
- 4. (Currently amended) The system, as set forth in claim [[1]] 6, wherein the pump is capable of pumping the flow material through the conduit at a plurality of flow rates.
 - 5. (Canceled)
- 6. (Currently amended) The A system, as set forth in claim 5 for evaluating or calibrating a bubble detector, comprising:

 a conduit adapted to pass a flow material therethrough, wherein the conduit is configured for passing flow materials of different viscosities;

 a pump operatively coupled to the conduit to pump the flow material through the conduit;

 a bubble-forming device operatively coupled to the conduit, the bubble-forming device being adapted to introduce bubbles into the flow material passing through the conduit; and

 a bubble detector to be evaluated positioned to examine the bubbles in the flow material passing through the conduit,

 wherein the bubble-forming device comprises:

a connecting device operatively coupled to the conduit;

a bubble-forming capillary adapted to be positioned within the connecting device in communication with the flow material passing through the conduit; and

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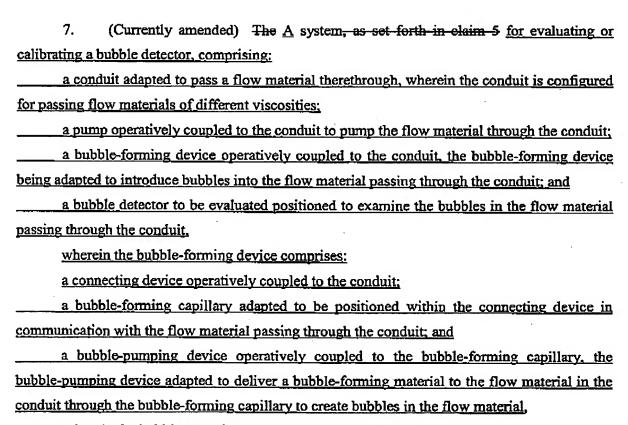
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a bubble-pumping device operatively coupled to the bubble-forming capillary, the bubble-pumping device adapted to deliver a bubble-forming material to the flow material in the conduit through the bubble-forming capillary to create bubbles in the flow material,

wherein the capillary comprises:

a proximal portion operatively coupled to the bubble-pumping device and a distal portion slidably positioned within the connecting device.



wherein the bubble-pumping device comprises a syringe.

- 8. (Currently amended) The system, as set forth in claim [[5]] 6, wherein the bubble-pumping device is adapted to deliver the bubble-forming material at a plurality of bubble flow rates and sizes.
- 9. (Currently amended) The system, as set forth in claim [[1]] 6, comprising: a pulse dampener operatively coupled the conduit between the pump and the bubble-forming device.

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- 10. (Currently amended) The system, as set forth in claim [[1]] 6, wherein the flow material comprises a surfactant.
- 11. (Original) The system, as set forth in claim 2, wherein the evaluation device comprises:

a previously evaluated bubble detector having a known bubble detection resolution.

12. (Original) The system, as set forth in claim 2, wherein the evaluation device comprises:

an inspection device adapted to record bubbles formed by the bubble-forming device.

13. (Previously presented) The system, as set forth in claim 12, wherein the inspection device comprises a camera operatively positioned proximate the bubble-forming device.

14-15. (Canceled)

- 16. (Currently amended) The A method of evaluating or calibrating a bubble detector comprising the acts of:, as set forth in claim 15
 - (a) pumping a flow material through a conduit, wherein the conduit is configured for passing flow materials of different viscosities;
 - (b) introducing bubbles into the flow material;
 - (c) examining the bubbles in the flow material with a bubble detector under evaluation; and
 - (d) detecting the bubbles in the flow material

wherein act (b) comprises the act of:

using a capillary to inject bubbles into the flow material,

wherein the act of using a capillary comprises the act of:

slidably positioning the capillary within the flow material to adjust the size of the bubbles.

17. (Currently amended) The method, as set forth in claim [[15]] 16, wherein the act of using a capillary comprises the act of:

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pumping a bubble-forming material through the capillary and into the flow material.

18. (Currently amended) The method, as set forth in claim [[14]] 16, wherein act (b) comprises the act of:

introducing a gas into the flow material to create the bubbles.

19. (Currently amended) The method, as set forth in claim [[14]] 16, comprising the act of:

mitigating pressure oscillations within the flow material.

20. (Currently amended) The method, as set forth in claim [[14]] 16, wherein act (c) comprises the act of:

using an ultrasonic probe to examine the bubbles in the flow material at a plurality of ultrasonic signal levels.

21. (Currently amended) The method, as set forth in claim [[14]] 16, wherein act (d) comprises the act of:

detecting the bubbles by visual inspection.

22. (Currently amended) The method, as set forth in claim [[14]] 16, wherein act (d) comprises the act of:

detecting the bubbles using a bubble detector having a known bubble detection resolution.

23. (Currently amended) The method, as set forth in claim [[14]] 16, comprising the act of:

comparing the examination of the bubbles in the flow material with the bubble detector with the detection of the bubbles in the flow material to calibrate the bubble detector.

- 24. (Original) The method of claim 23, comprising the acts of:
- (a) calculating a calibration factor from the examination of the bubbles in the flow material with the bubble detector and the detection of the bubbles in the flow material; and
- (b) applying the calibration factor to the bubble detector to calibrate the bubble detector.

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25. (Currently amended) The method, as set forth in claim [[14]] 16, wherein act (a) comprises the act of:

pumping the flow material in the conduit at a plurality of flow rates.

26. (Currently amended) The method, as set forth in claim [[14]] 16, wherein act (b) comprises the act of:

altering the size of the bubbles.

27. (Currently amended) The method, as set forth in claim [[14]] 16, wherein act (b) comprises the act of:

altering a formation rate of the bubbles.

28. (Original) The method, as set forth in claim 24, wherein act (b) comprises the act of:

programming the calibration factor into a memory of the bubble detector.

29-60. (Canceled)